Intelligence?

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In a very specific way, intelligence and information-processing are synonymous.

Information-processing takes place between differently-scaled models of a relevant context. The way in which these models relate to each other, and therefore the result of an inter-scalar processing, depends on the constraints which are imposed on inter-scalar computation, and on the manner in which those constraints are applied.

Mono-scalar 'systems' can always be deconstructed more or less precisely to a set of rules: a single non-fragmented scale corresponds to a single formalization. Any consequent 'systemic' complexity is the result of formal incompleteness or of our lack of understanding.

Multi-scalar 'systems' constitute artificially- or naturally-constrained hierarchies, where the style of processing depends on whether the inter-scalar constraints are externally imposed or internally recursively generated by the information-processing itself. These two types of hierarchy, artificial and natural, have very different properties, and exhibit completely different styles of 'intelligence'.

The unification of a processing assembly into a 'system' is *always* through our intervention, whether at a single scale or across multiple scales of operation. If an artificial hierarchy is not to be scale-fragmented, it must possess some kind of cross-scalar coherence, imposed through our manipulation of the inter-scalar constraints. A natural hierarchy generates this cross-scalar coherence itself, through an autonomy-negotiation between its various scales, creating a hyperscalar system.

This appears to be the 'meaning' of intelligence: it enables a multi-scalar system to operate as if it were simultaneously multi-scalar and mono-scalar. Different individual scales of operation retain a context-dependent degree of autonomy, but the entire assembly is unified at a hyperscalar level.

A 'system' is *always* hyperscalar, whether through artificially- or naturally-imposed constraints. It is questionable whether it would be possible to generate sufficient cross-scalar correlation in an artificial information-processing assembly to generate an interesting or useful degree of independent 'intelligence'. In any case, any attempt to do so in a definably-operating assembly such as a Boolean logic computer could only succeed if the logical definability were relaxed, either by intention or through the relativistic isolation of different parts of the assembly. Even then, current artificial information-processing mechanisms would be incapable of dealing non-catastrophically with the unpredictable structural incompletenesses.